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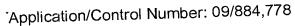


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	APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
	09/884,778	06/19/2001	Richard R. Hall	END920000187US1	2338
	5409 7	590 05/09/2002			
	ARLEN L. OLSEN SCHMEISER, OLSEN & WATTS 3 LEAR JET LANE			EXAMINER	
				DINH, TUAN T	
	SUITE 201 LATHAM, NY	7 12110		ART UNIT	PAPER NUMBER
	22.2.2.112.1141, 14.1	******		2827	#0
				DATE MAILED: 05/09/2002	2 7 8

Please find below and/or attached an Office communication concerning this application or proceeding.

		14/				
1	Application No.	Applicant(s)				
16	09/884,778	HALL ET AL.				
Office Action Summary	Examiner	Art Unit				
,	Tuan T Dinh	2827				
The MAILING DATE of this communication Period for Reply	appears on the cover shee	et with the correspondence address				
A SHORTENED STATUTORY PERIOD FOR RETHE MAILING DATE OF THIS COMMUNICATION - Extensions of time may be available under the provisions of 37 CFR after SIX (6) MONTHS from the mailing date of this communication. - If the period for reply specified above is less than thirty (30) days, a lif NO period for reply is specified above, the maximum statutory perions in the set or extended period for reply will, by stated and the set of the set o	N. 1.136(a). In no event, however, m reply within the statutory minimum of iod will apply and will expire SIX (6)	ay a reply be timely filed of thirty (30) days will be considered timely. MONTHS from the mailing date of this communication.				
1) Responsive to communication(s) filed on 1	1 February 2002 .					
- Proof	This action is non-final.					
3) Since this application is in condition for allo	wance except for formal	matters prosecution as to the merits is				
3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213. Disposition of Claims						
4)⊠ Claim(s) <u>21-24 and 27-35</u> is/are pending in	4)⊠ Claim(s) <u>21-24 and 27-35</u> is/are pending in the application.					
4a) Of the above claim(s) is/are withd	rawn from consideration.					
5) Claim(s) is/are allowed.						
6)⊠ Claim(s) <u>21-24 and 27-35</u> is/are rejected.						
7) Claim(s) is/are objected to.						
8) Claim(s) are subject to restriction and	d/or election requirement.					
Application Papers						
9)⊠ The specification is objected to by the Exami						
10)☐ The drawing(s) filed on is/are: a)☐ acc						
Applicant may not request that any objection to	the drawing(s) be held in al	peyance. See 37 CFR 1.85(a).				
11)区 The proposed drawing correction filed on 2加	<u>❷</u> is: a) I approved b)[disapproved by the Examiner.				
If approved, corrected drawings are required in reply to this Office action.						
12) The oath or declaration is objected to by the I	Examiner.					
Priority under 35 U.S.C. §§ 119 and 120						
13) Acknowledgment is made of a claim for forei	ign priority under 35 U.S.	C. § 119(a)-(d) or (f).				
a) ☐ All b) ☐ Some * c) ☐ None of:						
1. Certified copies of the priority docume						
2. Certified copies of the priority docume						
3. Copies of the certified copies of the prapplication from the International E* See the attached detailed Office action for a limit	Sureau (PCT Rule 17 2/a))				
14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application). a) ☐ The translation of the foreign language provisional application has been received.						
15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121. Attachment(s)						
1) Notice of References Cited (PTO-892)	🗂	-				
2) Notice of Praftsperson's Patent Drawing Review (PTO-948) 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s)	5) Notice	ew Summary (PTO-413) Paper No(s) of Informal Patent Application (PTO-152)				



DETAILED ACTION

Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

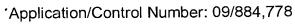
The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the **range of 50 to 150 words**. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Rejections - 35 USC § 112

- The following is a quotation of the second paragraph of 35 U.S.C. 112:
 The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
- 3. Claims 21-14 and 27-35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 21 and 27, line 1, it is unclear. What does applicant meant of "a method" of? And also what does applicant meant of "a structure" is?



Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
- 5. Claims 21-24, and 27-35 are rejected under 35 U.S.C. 102(b) as being anticipated by Kawakita et al. (U. S. Patent 5,440,075).

As best understood to claims 21-22 and 27-29, Kawakita discloses a structure and method of providing a conducting element into a through hole of a circuit board as shown in figures 1-13 comprising:

a conductive element (103, column 4, lines 56-57) embedded into an opening (through hole, column 4, line 54-55) of a laminate (101, column 4, line 53), the conductive element is press into the opening of the laminate, wherein the conductive element includes an inner element covered by an outer element (copper foil 102-figures 1-4, or 502-figure 5), (column 4, lines 57-68, column 5, lines 20-21).

As to claims 23-24, and 30, Kawakita discloses the structure and method as shown in figures 1-5 wherein the conductive element (103) is a sphere (see figure 1-3) or cylinder (figure 5).

As to claims 31 and 34, Kawakita discloses the structure and method as shown in figures 1-13 wherein the outer element (102, 502) of the conductive element (103) is a copper (column 4, line 57, column 5, lines 20-21).





As to claim 32, Kawakita discloses the structure as shown in figures 1-13 wherein the laminate is epoxy (column 5, line 1).

As to claims 33 and 35, Kawakita discloses the structure and method as shown in figures 1-13 wherein the inner element of the conductive element (103) is an insulating material such as glass, rubber, or plastic (figure 5, column 5, line 18-19).

Response to Arguments

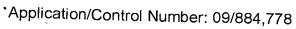
6. Applicant's arguments with respect to claims 21-14 and 27-35 have been considered but are most in view of the new ground(s) of rejection.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Rosenthal et al., Murakami, and Caporizzo disclose related art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan T Dinh whose telephone number is 703-306-5856. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L. Talbott can be reached on 703-305-9883. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-1341 for regular communications and 703-305-1341 for After Final communications.



Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

TD May 1, 2002.

KAMAND CUNEO PIMARY EXAMINER